



117. The apparatus of claim 27 in which the optics includes two cylindrical lenses, one of the cylindrical lenses near the sensor to project light horizontally onto sensor, and the other of the lenses positioned to collect light in the Z-axis dimension, the other of the lenses having a body that is bent around the first lens.

118. The apparatus of claim 76 in which the lens comprises an aspherical lens.

119. The apparatus of claim 76 in which the optics include at least one cylindrical lens near the sensor to project light horizontally onto the sensor.

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120. The apparatus of claim 76 in which the optics include two cylindrical lenses, one of the lenses near the sensor to project light horizontally onto sensor, and the other of the lenses positioned to collect light in the Z-axis dimension, the other lens having a body that is bent around the first lens.

121. The apparatus of claim 76 in which the optics and associated sensors are tilted inwardly towards each other in horizontal plane to overlap their fields.

122. The method of claim of 83 in which a lens-to-sensor distance and center pixel offset in reference to a center of the sensor are determined by sweeping a light source through known geometrical angles.--

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